

#### **84. Cost-Effective Outpatient Laparoscopic Hysterectomy**

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*Objective.* To ensure that laparoscopic hysterectomy such as CISH is sufficiently cost effective to be performed in ambulatory centers.

*Measurements and Main Results.* The most expensive disposable devices necessary for CISH were Endostapler (US \$500) and three staple reloads (each \$180), CURT morcellator (\$850), and serrated-edge macromorcellator for intraabdominal uterus morcellation (\$320); total \$2210/procedure. We developed operative modifications to eliminate use of such devices by dissecting the uterus from adnexa with scissors and suturing, high conization followed by conization of the cervical stump from the abdomen to remove the remaining endometrial canal, and successive cutting of the dissected uterus inside an endobag with scissors through the umbilical incision. Cost-optimized laparoscopic hysterectomy (CISH) was performed in 15 women, with early discharge after meeting defined discharge criteria. Outcome and cost-effectiveness of this modified CISH were compared with those of 15 standard CISH. Clinical outcome and postoperative follow-up of patients in both groups were almost identical and uneventful. Postoperative stay for patients operated with the cost-effective technique was shortened to 4 hours. Operative modifications required minimal time delay (average 5–10 min), but cost savings were \$33,150 over standard CISH. The savings might be even greater because many other expensive reusable instruments, such as a motor-driven morcellator, are not necessary with this technique.

*Conclusion.* Modified CISH was safe and highly cost effective; however, long-term follow-up is necessary to establish this for certain.

#### **85. Laparoscopic Mesh Sling Procedure as an Alternative to TVT**

JB Jaenisch. Mae de Deus Hospital, Porto Alegre, RS, Brazil.

*Objective.* To describe experience with laparoscopic mesh sling procedure in patients with GSUI (intrinsic sphincter deficiency, urethra hypermobility).

*Measurements and Main Results.* The procedure was performed with polypropylene mesh in 30 women and avoided many potential complications of TVT.

*Conclusion.* Direct vision reduces the chances of bladder and vascular injuries, especially in patients who have previously had surgery in the space of Retzius.

#### **86. Chronic Pelvic Pain Syndrome as a Form of Complex Regional Pain Syndrome**

TI Janicki. Case Western Reserve University, Cleveland, Ohio.

*Objective.* To describe a new hypothesis of CPP syndrome as a form of complex regional pain syndrome involving changes in function of the autonomic nervous system.

*Measurements and Main Results.* Due to a variety of factors including endometriosis, posttraumatic stress disorder, and other trauma, a maladaptive “program” involving maintenance of pain is created in the central nervous system and especially the autonomic nervous system. The program continues to run independently. Minimal endometriosis, adhesions, and occult hernias become triggers rather than the sole causes of pain. Removal of the triggers gives temporary reprieve to the patient, but because the program continues to run, it will acquire new sources of pain or pain equivalents within 12 months. Lack of correlation exists between the presence or absence of visible pathology and pain preception during laparoscopic pain mapping.

*Conclusion.* A new symptom-oriented scoring and recording system for pelvic pain mapping under conscious sedation, the autonomic symptom profile, was developed and applied in a case control study in women with CPP and age-matched controls.

#### **87. Peritoneal Cell Death due to Heated-Only CO<sub>2</sub> Insufflation**

G Johnston Jr, DE Ott. Mercer University, Macon, Georgia.

*Objective.* To assess the effects of standard cold dry (20° C, 0.0002% humidity) warmed only standard dry (35° C, 0.0002% humidity), and warm wet (35° C, 95% humidity using the Insuflow device) CO<sub>2</sub> during insufflation.

*Measurements and Main Results.* Cell desiccation and viability were evaluated by assessing incorporation of fluorescent dye into cell DNA. Flow of each type

gas was directed over peritoneal-like cells at 1.5 and 3 L/minute for durations up to 20 minutes. The cells were then assessed by fluorescent dye uptake to determine viability. Cell viability was measured by lack of incorporation of fluorescent dye into its DNA, with dye incorporation indicating dead or dying cells. Significant cell DNA fragmentation and cell death occurred in the cold dry and warmed-only groups ( $p < 0.05$ ) within 4 to 5 minutes of gas exposure. Warm wet gas maintained cell viability even after 20 minutes of continuous exposure.

*Conclusion.* Rapid evaporation caused by dry gas and gas flow desiccates the cell. It is necessary to warm wet gas to preserve normal tissue moisture, maintain cellular integrity, and prevent cell death. Warmed-only CO<sub>2</sub> (warm and still bone-dry) results in loss of peritoneal cell integrity and causes cell death.

#### 88. Results of a Phase II Clinical Study of the Essure System for Hysteroscopic Tubal Sterilization

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*Objective.* To determine the safety and effectiveness of Essure (Conceptus, Inc., San Carlos, CA) as a hysteroscopic method for permanent birth control.

*Measurements and Main Results.* Essure micro-inserts are placed into the proximal tubal lumen to span the uterotubal junction. The procedure is performed under paracervical block or minimal sedation. During 12 weeks after placement, materials in the device cause a benign local tissue in-growth limited to the area of the device that results in occlusion of the tube. The Essure guidewire-catheter is delivered through a 5.5-mm hysteroscope with a minimum 5F working channel. Once the catheter is inside the fallopian tube, the micro-insert is released. The expandable outer coil of the micro-insert holds the device in the tube, while Dacron-like fibers of the inner coil elicit the tissue response. An HSG was performed at 3 months after the procedure to verify tubal occlusion and micro-insert placement. At five sites in the United States, Australia, and Europe, 227 women of proved fertility underwent the procedure and 88% had successful bilateral placement of the micro-insert. Procedure time was 18 minutes (hysteroscopy time). Reasons for failed placement were anatomic abnormality (48%)

and procedural (26%) and performance-related issues (18%). To date, 197 women have been followed for at least 12 months, and 112 women for at least 24 months. Of these, 95 women report tolerance with wearing Essure as good, very good, or excellent. Over 4900 women-months have been recorded without a reported pregnancy, giving statistical estimated 1-year effectiveness of 99.5%.

*Conclusion.* The Essure system is straightforward to place, is well tolerated by women, and allowed no pregnancies in follow-up as long as 36 months.

#### 89. A Safe Technique for Sacrospinous Ligament Suspension in Women with Vaginal Vault or Uterine Prolapse

M Khairy Jr, M Aloush, N Ashmawy, A Mansour, N Orabi. Benha Faculty of Medicine, Cairo, Egypt.

*Objective.* To describe a new approach to suspension of the sacrospinous ligament.

*Measurements and Main Results.* Eight women with posthysterectomy vaginal vault prolapse and 10 with childbearing prolapse underwent right sacrospinous colpopexy or cervicopexy. The procedure was performed with a left-hand inverted Dechamps suture carrier loaded with polypropylene suture. The suture carrier was inserted and guided blindly between the index and middle fingers of the right hand. Associated cystocele, rectocele, enterocele, and stress incontinence were managed simultaneously. Mean operating time was  $60 \pm 15$  minutes. No complications occurred. Follow-up from 3 to 24 months showed excellent suspension in all but one woman who suffered a relapse when the suture became untied.

*Conclusion.* This vaginal technique is valuable, especially with the modification described, and a larger trial is planned for statistical evaluation.

#### 90. Oncologic Operations at the Department of Gynecology, Zabok

M Kopjar, M Zadro, I Maricic. Department of Gynecology and Obstetrics, General Hospital, Croatian Society for Gynecologic Endoscopy, Zagreb, Croatia.

*Objective.* To present our results of minimally invasive gynecologic oncologic surgery.